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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,635	03/23/2004	Gregory I. Rozman	67010-095; B05799-AT1	2588

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EXAMINER

GLASS, ERICK DAVID

ART UNIT PAPER NUMBER

2837

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/806,635	<b>Applicant(s)</b> ROZMAN ET AL.	
	<b>Examiner</b> Erick Glass	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-20 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                 |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/10/06</u> | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos (4,992,721) in view of Yoneta et al. (5,574,345).

With respect to claims 1, 9, and 16, Latos discloses a system and method for controlling the system, comprising: a permanent magnet motor (Fig. 2, #22); a first phase controlled rectifier that selectively couples the motor to a power source for providing power to the motor during an engine starting operation (Fig. 2, #26 a permanent magnet motor that is coupled with an engine so that selectively couples the motor #22 to 3-phase power) and the permanent magnet motor is coupled with the engine and rotate simultaneously (Fig. 2, #22 and #12 move simultaneously; see also col. 3, lines 40-62). With respect to claim 16, Latos also discloses a power converter (fig. 2, 32) and a gas turbine engine (col. 3, lines 43-44; jet engine is interpreted as a gas turbine).

Latos does not disclose a second rectifier.

Yoneta et al. discloses a second rectifier circuit (fig. 3, #4). Implementing the rectifier circuit with the inverter circuit of Latos (Fig. 2, #32) makes the Latos system have a second rectifier that couples the motor (Fig. 2, #22) to a load (Fig. 2, #16). The

Art Unit: 2837

motivation to use a second rectifier is to rectify the ac regenerative power being supplied back.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement into the Latos system a second rectifier, thereby providing the advantage of using the inverter already in the circuit to rectify the regenerative power being supplied back, as taught by Yoneta et al. (column 2, lines 47-51).

With respect to claims 2, 10, and 17, Latos does not teach were the rectifiers alternatively conducting. Yoneta et al. discloses the first and second rectifiers controlled so that one is conducting while the other is off (column 4, lines 25-32). It would have been obvious to one having ordinary skill in the art to implement alternately conducting rectifiers into the circuit of Latos to allow the second rectifier to rectify the ac regenerative power being supplied back from the motor, with power failure of the ac power source, as taught by Yoneta et al. (column 4, lines 25-31).

With respect to claims 3 and 11, Latos discloses a power converter associated with the first rectifier that converts power from the source to a variable voltage (Fig. 2, #32 supplies variable voltage to #22 for starting the engine).

With respect to claims 4 and 12, Yoneta et al. disclose a dc link capacitor bank (Fig. 3, 3). It is would have been obvious to one having ordinary skill in the art at the time of the invention to implement a capacitor across the dc link circuitry of Latos, to provide a smoothing the transferred signal as taught by Yoneta et al.

With respect to claims 5, 13, and 14, Yoneta et al. disclose the second phase controlled rectifier (fig. 3, 4). A rectifier inherently converts three-phase power into a constant DC voltage. Adding a rectifier to the circuit of Latos make the inverter of Latos the power converter (fig. 2, #32). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement into the Latos system a rectifier, thereby providing the advantage of rectifying the regenerative power supplied back, as taught by Yoneta et al (column 2, lines 47-51).

With respect to claims 6, 15, 19, and 20, Latos discloses a filter between the inverter and the load, where the filter provides a selected quality of power to the load (Fig. 2, #34).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Latos and Yoneta et al; as applied to claims 1, 5, and 6 above, and further in view of Honda (2004/0008527).

Latos and Yoneta et al. do not disclose the filter comprising a differential mode filter in series with a common mode filter. Honda discloses a differential mode filter in series with a common mode filter (Fig. 7, #70). The motivation to use both filters in series is to filter both the differential mode noise and the common mode noise ([0051]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that the filter of Latos and Yoneta et al. would include differential and common mode filters, respectively, thereby providing the advantage of filtering differential mode noise and common mode noise, as taught by Honda.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos (4,992,721) in view of Yoneta et al. (5,574,345) and in further view of Amano et al. (6,426,608).

With respect to claims 8 and 18, Latos, and Yoneta et al. do not disclose a pulse width modulating converter. Amano et al. teaches a pulse width modulating converter (fig. 1, 8). It is obvious to one having ordinary skill in the art at the time of the invention to implement a PWM converter in the circuit of Latos and Yoneta et al, to provide the advantage to changing the control system to digital to receive a more reliable signal as taught by Amano et al.

### ***Response to Arguments***

Applicant's arguments filed August 2, 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the applicant's invention has more parts to constitute a similar outcome of what is known in the art. The Yoneta reference shows an inverter used to rectify regenerative power back through the system to the load.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EG



LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER